User Manual for 500kW Photovoltaic Grid-connected Inverter

SOLARTEC CENTRAL 500

Licence number:

Executed standard:

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1. General

1.1 Foreword

Dear users,

Thank you for using the photovoltaic grid-connected inverter Solartec Central 500 produced by Beijing Kinglong New Energy Technology Co. Ltd. We sincerely hope that the product meets your demand. Please do not hesitate to contact us if you have any suggestions.

1.2 How to Use this Manual

This manual provides the users detailed product information, and installation and operation instructions for Solartec Central 500 photovoltaic grid-connected inverter from Beijing Kinglong New Energy Technology Co. Ltd.

Please read this manual carefully before using the product.

2. Safety Information

2.1 Symbol Description

The following symbols are used in this manual. To use the product correctly, please read the symbol description carefully.

	This symbol represents high hazard, which may cause personal casualty or serious accidents if not observed.
	This symbol represents medium hazard, which may cause personal injury or equipment damage if not observed.
	This symbol represents low hazard, which may cause the product unable to operate properly if not observed.

2.2 Safety Instructions

- Please read this manual carefully before installation. We do not provide any warranty for equipment damages caused by installation not in accordance with the instructions contained in this manual.
- All operations and connections must be carried out by professional electrical or mechanical engineers.
- During installation, do not touch any parts in the cabinet other than the terminals. All electrical installations must comply with local electrical installation standards.
- Solartec Central 500 does not include user self-maintenance module. When maintenance is required, please contact designated local system installation and maintenance personnel.

- Using Solartec Central 500 grid-connected power generation requires the permission of local power supply department and relevant operations carried out by professionals.
- When photovoltaic array is installed in the daytime, it should be covered by an opaque material; otherwise, a high voltage will be generated at the array terminal in the sunlight.

Make sure that the DC input voltage does not exceed 800V. Higher input voltages may cause permanent damage of Solartec Central 500 and other losses. We do not provide any warranty or bear any responsibility for this.

3. Product Introduction

3.1 Photovoltaic Grid-connected Power Generation System

Solar module Grid-connected inverter MV transformer Public power grid

Figure 3-1 Schematic diagram of photovoltaic grid-connected power generation system

The Photovoltaic grid-connected power generation system consists of solar module, grid-connected inverter and distribution system (as shown in Figure 3-1). Solar energy is converted into direct current via the photovoltaic module, then converted into an alternating current having the same frequency and phase as the grid voltage via the grid-connected inverter, and finally incorporated into the power grid after being boosted and isolated by the medium voltage transformer.

3.2 Circuit Structure

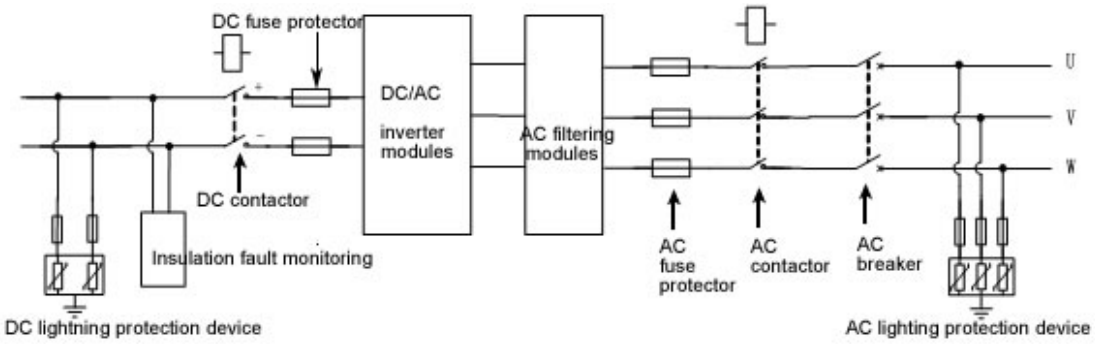


Figure 3-2 Schematic diagram of the main circuit of Solartec Central 500

As shown in Figure 3-2, the schematic diagram of the main circuit of Solartec Central 500, the inverter converts direct current into alternating current via the three-phase bridge converter (DC/AC inverter module) and then into a sine wave voltage via the AC filter.

3.3 Appearance Description

- **LCD Touch screen**

  The touch screen provides the user an easily operated and user-friendly human-machine interface. Its functions include operation data display, start/stop control, alarm processing (display, recording and inquiry) and historical fault report

- **LED indicators**

  They are used to indicate the operating state of the system.

Indicator status	Status description	Operating state description
	All off	The system is in off state
	Blue indicator on	Standby state
	Green indicator on	Running state
	Red indicator on	Fault state

Table 3-1 Indicators and status description

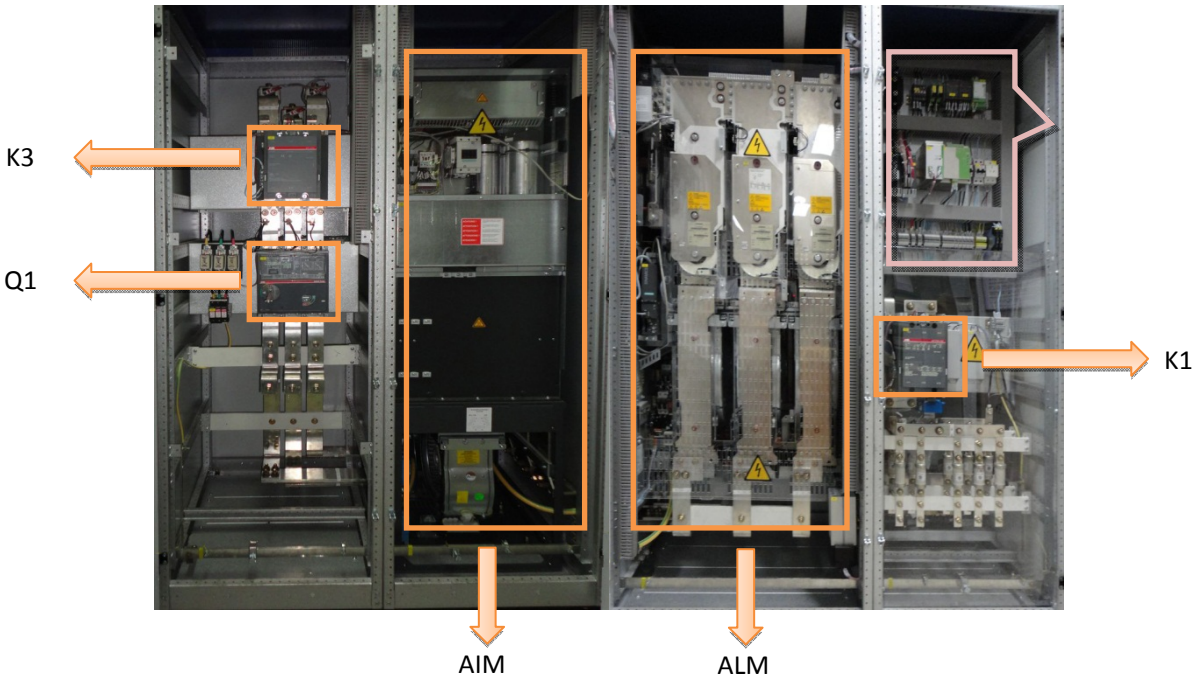
- **Emergency Stop Switch**

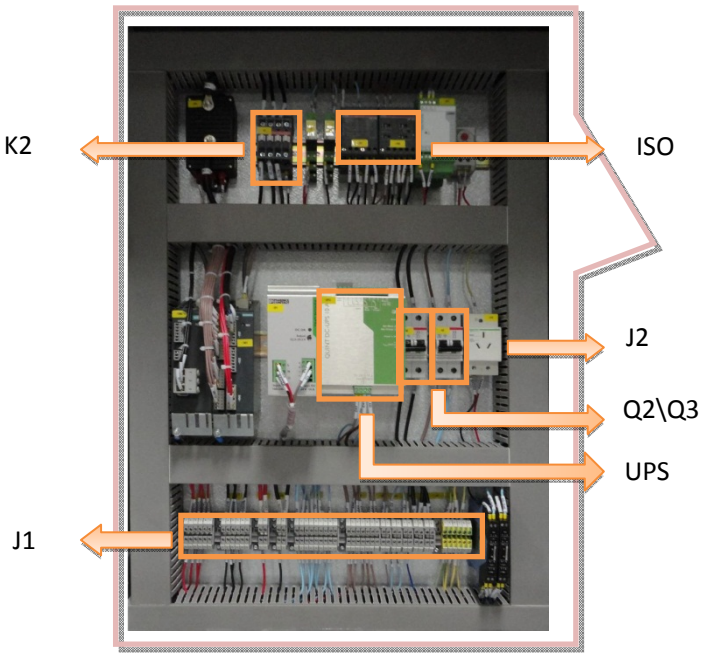
  The inverter has an external emergency stop switch. When it is necessary to stop the inverter in hazardous situations, press the emergency stop switch.

- **AC Circuit Breaker**

  It is used to make or break the connection between the equipment and the power grid. When the circuit breaker is closed, the system is switched on. When the circuit breaker is open, the system is switched off. At this time, the power grid terminal is still live.

3.4 Internal Component Description





- K1 - main DC contactor
- K2 – precharge contactor

- K3 - main AC contactor
- Q1 - main AC circuit breaker
- Q2 – control power circuit breaker
- Q3 – UPS circuit breaker
- UPS – uninterrupted power supply
- AIM – filter module
- ALM – inverter module
- J1 – supply terminal
- J2-220Vac socket
- ISO – insulation monitor

3.5 Technical Characteristics

Some critical technical characteristics of Solartec Central 500 grid-connected inverters are listed below:

High efficiency	The maximum efficiency is up to 98.3%, the European weighted efficiency is 97.9%.
Maximum Power Point Tracking (MPPT)	The inverter executes Maximum Power Point Tracking (MPPT) algorithm to track the PV array maximum peak power point at any ambient temperatures and under any lighting conditions.
Anti-islanding protection	The inverter uses active and passive detection methods to detect the occurrence of islanding and stops automatically. It makes a reconnection when the line voltage returns to the specified range.
Low Voltage Ride Through （LVRT）	The inverter provides low voltage ride through function. The system includes an additional component, which enables quick reponse to the voltage dips in the power grid and resumption of grid-connected power generation after fault clearance.
Reactive and power factor control	The inverter supports reactive power output, with the power factor fully controllable within 0.98(lagging) ~ 0.98(leading)
Low standby power consumption	The nighttime power consumption is less than 40W.
PV array ground fault monitoring	The inverter can be equipped with a PV array ground fault monitoring device to monitor the PV array and the positive and negative DC buses of the inverter for ground faults.
Very low Current Total Harmonic Distortion (ITHD)	The current total harmonic distortion produced by the inverter is generally less than 3%.
Automatic identification of phase sequence of the power grid	The inverter can automatically identify the phase sequence of the AC power grid. It has no phase sequence requirements when connected to the power grid.

Remote monitoring	The inverter can be equipped with various types of communication interfaces, such as optical fiber interface, to support remote monitoring of the inverter.

4. Product installation

4.1 General

- **Check for Transportation Damages**

Solartec Central 500 has been tested and inspected before delivery. However, damage may occur during transportation. Please check it carefully before installation. In case of any damage, please contact the transportation company or Beijing Kinglong New Energy Technology Co. Ltd. Please provide the photo of the damaged location, so that we can provide you with fast and quality service.

- **Basic Installation Requirements**

Since Solartec Central 500 is electronic equipment with the waterproof level of IP20. Do not place it in humid places. The following are the basic requirements:

✧ It should be installed indoors and protected from sunlight and rain.

✧ Because the equipment may produce noises (<65dB) during operation, it should preferably be installed far away from residential areas.

✧ The mounting floor shall be firm and level.

✧ It shall be installed in such a position that the touch screen can be observed or operated conveniently and that the opening and closing of the cabinet door are not affected.

✧ The ambient temperature shall be within a specified range (-25℃～50℃).

✧ There must be a sufficient distance between the cabinet and the walls (>40cm) in order to ensure ventilation and heat dissipation.

✧ The installation environment shall be well ventilated.

✧ Because the equipment may generate heat during operation, do not place it near inflammable and explosive substances.

✧ The installation environment shall be clean and dust-free.

4.2 Mechanical Installation

4.2.1 Safety Instructions

As an electronic product with a DC side voltage of up to 800V and an AC side voltage of up to 300V, it is dangerous to touch its live parts.

	This device must be installed by professional electricians.
	Before installation and maintenance, make sure that both the AC and DC sides are voltage-free and that the capacitor of the DC bus has been discharged to the safe voltage range.

4.2.2 Installation Method

- **Crane Lifting**

✧ The lifting sling or rope must have a sufficient rated load capacity, i.e., for four-point lifting, the lifting capacity of each point must be greater than half the weight of the cabinet.

✧ The lifting sling or rope must have a sufficient length to ensure that the angle between the sling and the top edge of the cabinet is greater than 45°in accordance with DIN 580, as shown in Figure 4-1. Using a too short sling may apply too much pressure on the lifting ring and damage it.

✧ Before lifting, check to see if the crane is located correctly above the center of the cabinet in order to ensure that the cabinet will not swing on the rope during lifting.

✧ The paint on the top edge of the cabinet shall be protected from wear, as shown in Figure 4-2.

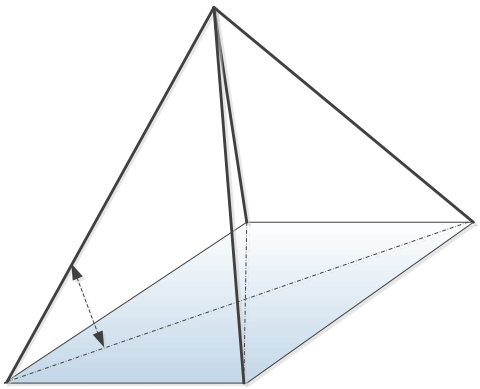


Figure 4-1 Cable angle in four-point lifting

Note: The angle of the cable or rope must be greater than 45°.

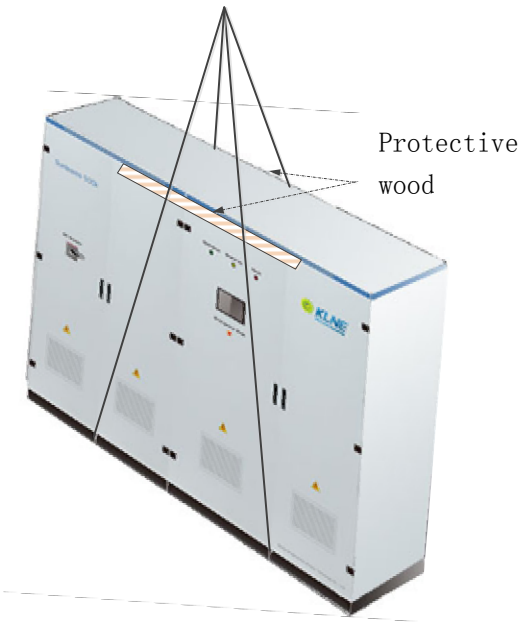


Figure 4-2 Wear protection position

- **Forklift Lifting**

Crane lifting is the first choice. Forklift lifting is used only when very necessary.

✧ Make sure that the floor is enough to withstand the total weight of the cabinet and the forklift.

✧ Make sure that the forklift has sufficient lifting capacity.

✧ Provide the fork arm with a pad made of rubber or other suitable materials to prevent damages.

✧ Keep the center of gravity steady. Do not tilt the cabinet during lifting.

✧ Lower the product slowly.

Figure 4-3

4.3 Electrical Installation

4.3.1 Safety Instructions

Before operation, make sure that both the AC and DC sides are voltage-free and that the capacitor of the DC bus has been discharged to the safe voltage range.

4.3.2 Input and Output Requirements

- Photovoltaic Array

For Solartec Central 500, the recommended phtovoltaic array maximum power can be up to 550kW. The maximum array open circuit voltage shall not exceed 800V; otherwise, the equipment may be damaged.

Recommended photovoltaic array maximum power: 550kW

Maximum photovoltaic array open circuit voltage: 800V

- Three-phase Power Grid

Solartec Central 500 outputs a 300V three-phase AC voltage, which is connected to the secondary side of the

medium voltage transformer and then incorporated into the power grid after being boosted and isolated by the medium voltage transformer. The secondary side of the medium voltage transformer shall be a three-phase IT system with a voltage fluctuation of -15%～+10% and a frequency of 49.5-50.5Hz.

Permission shall be obtained from local electric power department before the installation of the grid-connected inverter.

Grid voltage: 255-330Vac

Grid frequency: 49.5-50.5Hz

The phase sequence of the power grid must be such that the phase A voltage precedes the phase B voltage by 120°.

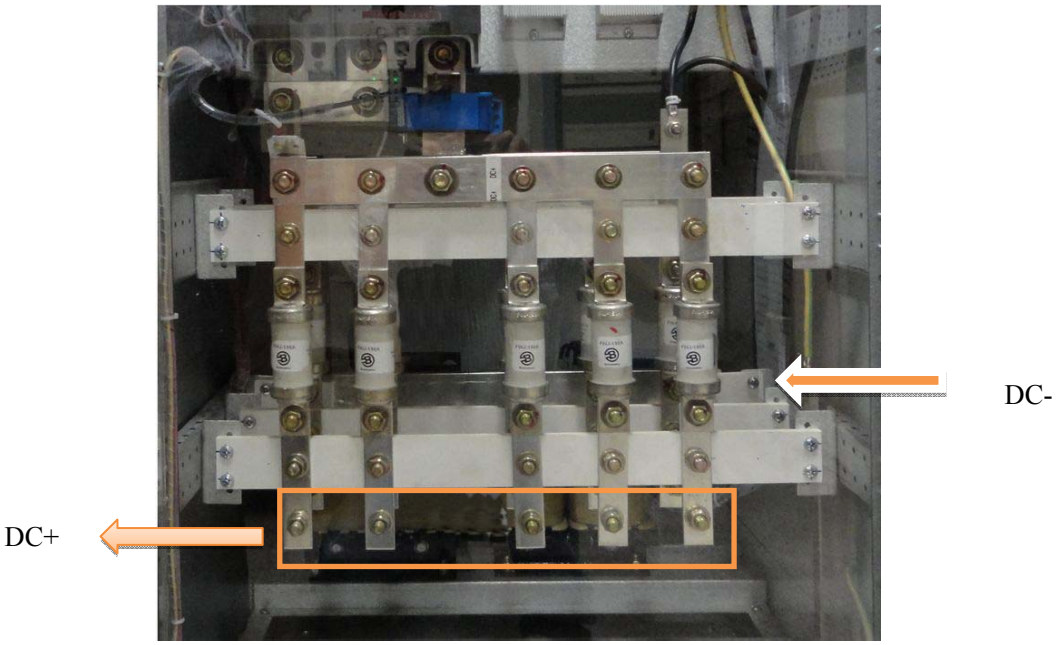
4.3.3 Cable Requirements

Cable	Size requirements (mm^2)	Screw size	Torque（N·m）
Photovoltaic array DC +	≥50 mm^2, 10 lines	M10	34
Photovoltaic array DC-	≥50 mm^2, 10 lines	M10	34
Ground wire PE	≥35mm^2	-	-
Phase A of the power grid	≥185mm^2×3	M10	34
Phase B of the power grid	≥185mm^2×3	M10	34
Phase C of the power grid	≥185mm^2×3	M10	34

4.3.4 Connection Mode of the DC Side

The photovoltaic array open circuit voltage shall not exceed 800V, otherwise the equipment may be damaged.

Make sure that the positive and negative polarities of the photovoltaic array are correct.



DC+ and DC- connector bars: the inverter provides 10 lines of photovoltaic array input, which are connected respectively to the positive and negative poles of the photovoltaic array. (The two front rows are DC+, the rear row is DC-)

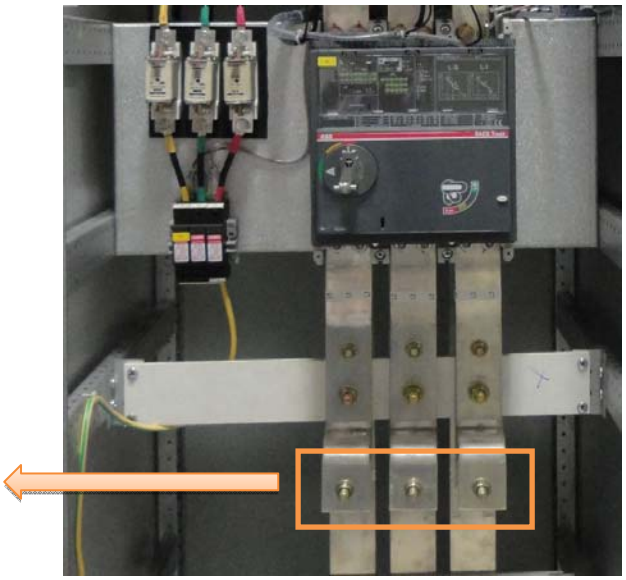
- Measure the photovoltaic array open circuit voltage with a multimeter to make sure that it does not exceed **800V;**
- Confirm the positive and negative polarities with a multimeter;
- Connect the positive pole of the photovoltaic array to the "**DC＋**" copper bar of DC input;
- Connect the negative pole of the photovoltaic array to the "**DC－**" copper bar of DC input;
- Make sure that the wires are connected securely.

4.3.5 Connection Mode of the AC Side

Connect the AC power grid:

Before connecting the AC power grid, make sure that the AC incoming line is voltage-free.

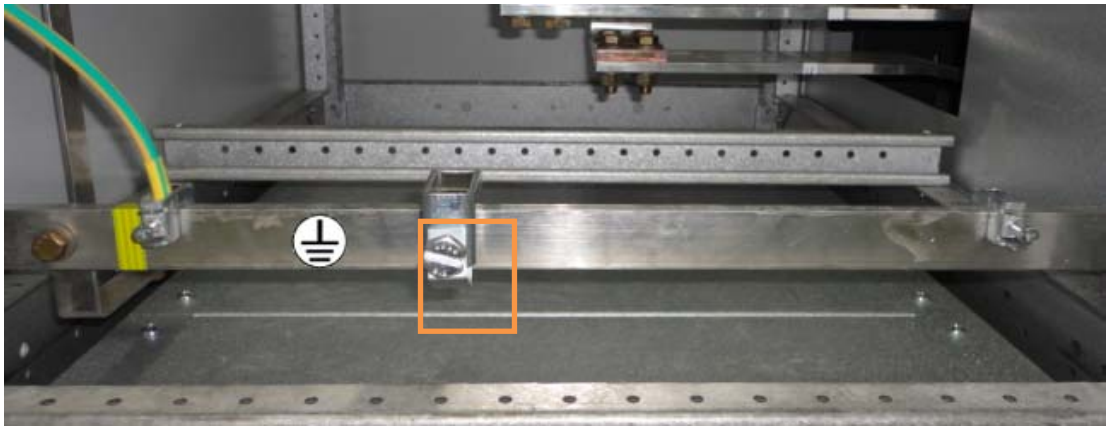
L1、L2、L3



- Open the AC side distribution circuit breaker and measure with a multimeter to make sure that the AC line connected to the terminal is voltage-free.
- Connect the three phases of the AC output to the three phases of the secondary side of the medium voltage transformer;
- Make sure that the wires are connected securely.

4.3.6 Connection Mode of the Ground Wire

In the cabinet of Solartec Central 500, a ground bar is reserved for the user to connect the special ground cable securely to the ground terminal in Solartec Central 500.



5. Functions and Operating Method

5.1 Operating Mode

Solartec Central 500 photovoltaic grid-connected inverter has four states, stopped state, standby state, running state and fault state. Solartec Central 500 can automatically switch between these four operating states by judging the photovoltaic array voltage and other external conditions. The description and switching conditions of these four operating states are given below:

- **Stopped State**

In the stopped state, the inverter is disconnected from the photovoltaic array and the power grid, the AC contactor, DC contactor and precharge contactor in the inverter are open.

- **Standby State**

In the standby state, the AC contactor and DC contactor of the inverter are closed; the inverter can start operating once the external conditions are met.

- **Running State**

In the running state, the inverter enables the output of PWM signal and operates in the grid-connection power generation mode and uses the maximum power point tracking (MPPT) technology to convert the direct current produced by the photovoltaic array into alternating current and incorporate it into the power grid to the maximum extent.

- **Fault State**

In the fault state, the inverter blocks the PWM signal to stop power generation. Whether to start automatically or to wait for manual reset is decided according to the nature of the fault and the external conditions.

5.2 Switching Relationship

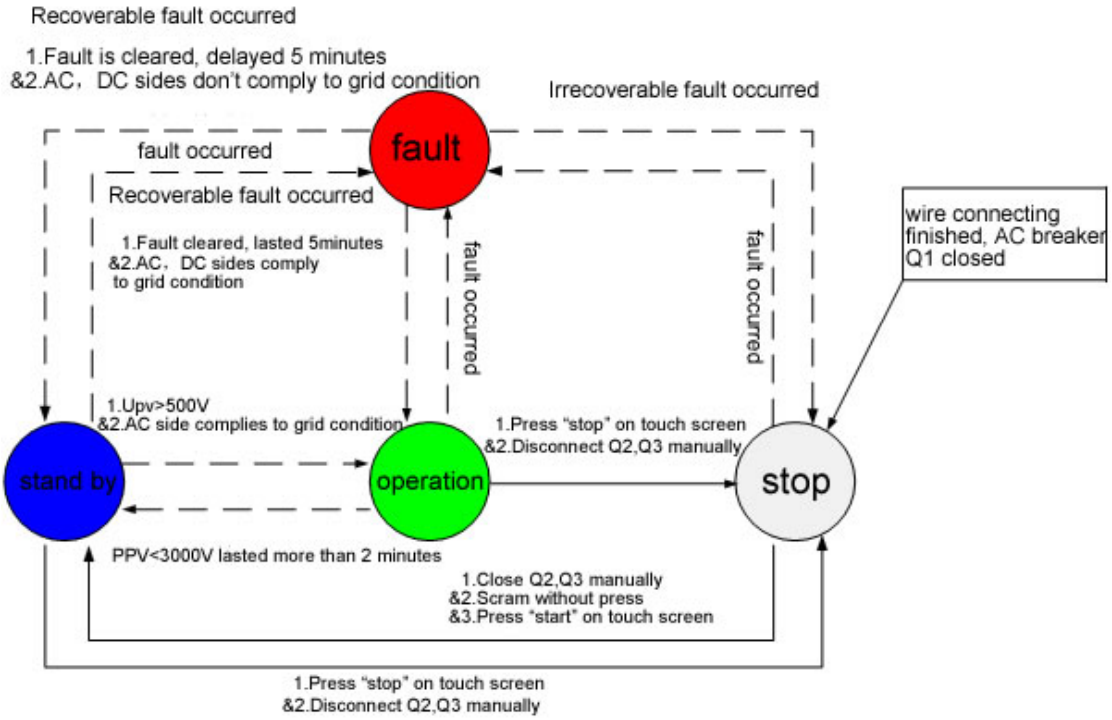


Figure 5-1 Switching relationship between operating states

Note:

- The dashed lines represent automatic execution.
- The solid lines represent manual operation.
- "&" means that it is necessary to meet multiple conditions at the same time.
- Upv is the DC voltage of the component.
- Ppv is the power of the component.

5.3 Touch Screen Operation

Level I picture	Level II picture	Content description
Home		Display the main data and state parameters of the equipment.
Params		View the detailed parameters of the equipment and change the relevant parameters.
	Languages	Set the language of the operating picture (Chinese, English).
	Real-time parms	View the real-time values of the detailed parameters of the equipment.
	User params	View and change the parameters that can be changed by the user.
	Mfr. params	View and change the manufacturer parameters and advanced parameters.
Fault		View the fault messages.
	Latest fault	View the latest fault.
	Fault history	View and inquire the historical faults.
His-data		Inquire and export the historical data.
Energy		View the daily electricity generation of the day.
Start/Stop		Control the start/stop of the inverter.

Note:

To provide faster operation, each function picture includes navigation menu and state indication (with the same meaning). You can go from the function pictures at any level to the pictures at the other level.

5.3.1 Default Main Picture

<table>
<tr>
<td>
</td>
<td>Main operation data and state indication.
This picture includes structure diagram of photovoltaic grid-connected power generation system, DC voltage value, DC current value, AC line voltage value and AC line current value, output power, daily electricity generation and total electricity generation, system time, manual/automatic state, equipment state, etc.</td>
</tr>
<tr>
<td colspan="2">Note:
① DC side voltage and current;
② AC side line AB voltage, line BC voltage and line CA voltage;
③ AC side phase A current, phase B current, phase C current;
④ Manual/automatic state. After startup, the inverter operates automatically and switches automatically between “Running”, “Standby” and other states according to the conditions of the AC and DC sides. When it is stopped manually or due to a non-recoverable fault, the system switches to the manual state and needs to be operated manually;
⑤ Equipment state. The standby state of the equipment is indicated by a blue icon. The running state is indicated by a green icon, and the fault state is indicated by a flashing red icon;
⑥ Navigation menu. You can go from any picture to other function pictures rapidly</td>
</tr>
</table>

and conveniently.

5.3.2 Start/stop Operation

	1. Start operation. In any function picture, click the “Start/Stop” button on the navigation menu, a dialog box will pop up, as shown in the figure. Click the “Start” button. If you do not want to start the equipment now, click the “✖” icon on the top right corner of the dialog box to close the dialog box.
	2. Stop operation In any function picture, click the “Start/Stop” button on the navigation menu, and a dialog box will pop up as shown in the figure. Click the “Stop” button. If you do not want to stop the equipment now, click the “✖” icon on the top right corner of the dialog box to close the dialog box.

Note:

① You can open this picture to execute the “Start/Stop” operation from any picture.

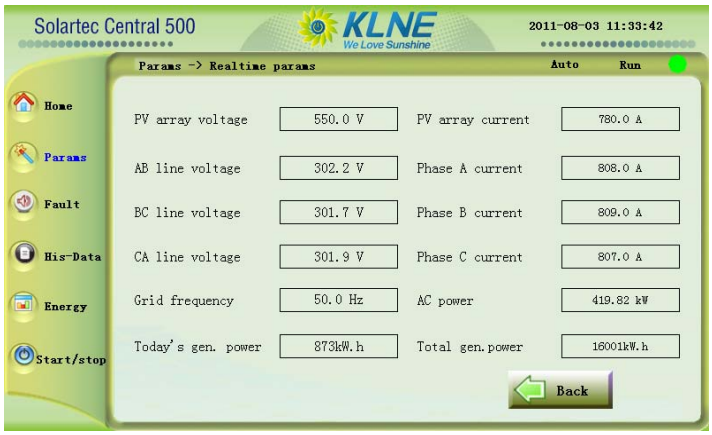
5.3.3 Switching between Languages

	1. Click the “Params” button to enter the equipment parameters picture, then click the “Language setting” button.
	2. Click “中文” or “English” as required to switch to the desired language. Click the “Back” button to return to the equipment parameters picture.

Note:

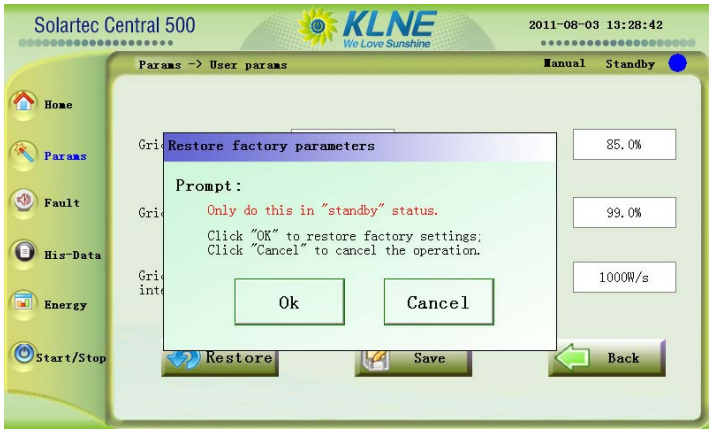
① The current version of the equipment supports two languages, “中文” and “English”. You can switch between these two languages as required.

5.3.4 View the Real-time Data

<table>
<tr>
<td>
</td>
<td>1. Click the “Params” button to enter the equipment parameters picture, then click the “Real-time params” button.</td>
</tr>
<tr>
<td> 
</td>
<td>2. This picture displays panel voltage, panel current, AB line voltage, BC line voltage, CA line voltage, phase A current, phase B current, phase C current, grid frequency, AC power, today’s generated power and total generated power.
Click the “Back” button to return to the equipment parameters picture.</td>
</tr>
<tr>
<td colspan="2">Note:
① This picture mainly displays the real-time values of the key parameters related to equipment operation.</td>
</tr>
</table>

5.3.5 Change the User Parameters

	1. Click the “Params” button to enter the equipment parameters picture, then click the “User params” button.
	2. This picture displays grid overvoltage, grid undervoltage, grid freq exceeded, grid freq undershot, grid failure retry interval, power increase rate and the button used to restore default parameters. Click the “Back” button to return to the equipment parameters picture.
	3. Parameter modification Click the “Data frame”, an input box will pop up, as shown in the figure. Enter the parameter, and then click “OK”. If you do not want to change the parameter, click “Cancel”.



4. Restore factory parameters

Click the “Restore” button, a prompt dialog box will pop up for confirmation. If you want to restore factory parameters, click “OK”; if not, click “Cancel”.

Note:

① Each parameter has an effective range. If the input value is out of the range, the system will change it to the upper or lower limit automatically;

② Please enter the standby mode before executing the operation of restoring factory parameters; otherwise, you will be unable to execute this operation;

③ After executing the operation of restoring factory parameters, the equipment changes the key parameters to the default values and clear the electricity generation. Please be careful when you execute this operation, so as not to cause unnecessary troubles.

5.3.6 View the Manufacturer Parameters

1. Click the “Params” button to enter the equipment parameters picture; then click the “Mfr. params” button.

	2. This picture displays model number, serial number, manufacture date , software version, DC link voltage, line overcurrent and DC link starting voltage. Click the “Back” button to return to the equipment parameters picture.
Note: ① Each parameter has been set according to actual conditions of the solar panel and the local power grid and is read-only to the user; ② If the actual solar panel and power grid conditions are special, please contact the equipment manufacturer for parameter adjustment.	

5.3.7 View the Fault Messages

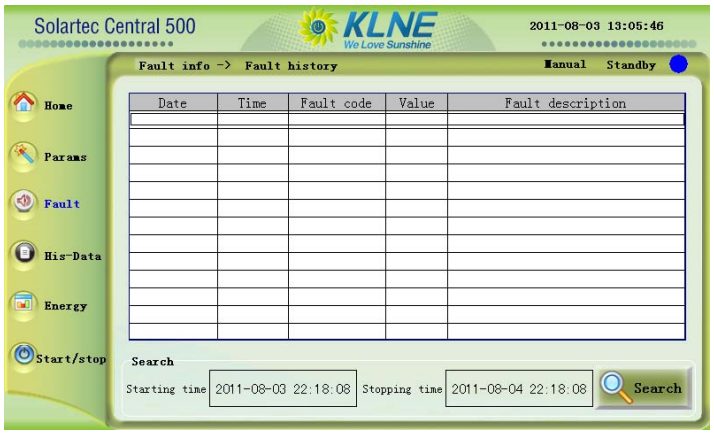
	1. Click the “Fault” button on the navigation menu to open the fault message selection picture, click the “Latest fault” button to enter the current fault picture, or click the “Fault history” button to enter the historical faults picture.
	2. View the current fault message. When the equipment state indication icon is red and “Fault” is displayed, you can

view the detailed fault message through this picture. Please handle the fault according to the fault diagnosis information given in Chapter 7.

For recoverable faults, the system can recover the fault automatically without manual intervention.

For non-recoverable faults, handle the fault manually and then click “Clear” to clear the listed info.

Click the “Back” button to return to the fault message selection picture.



3. View the historical fault messages.

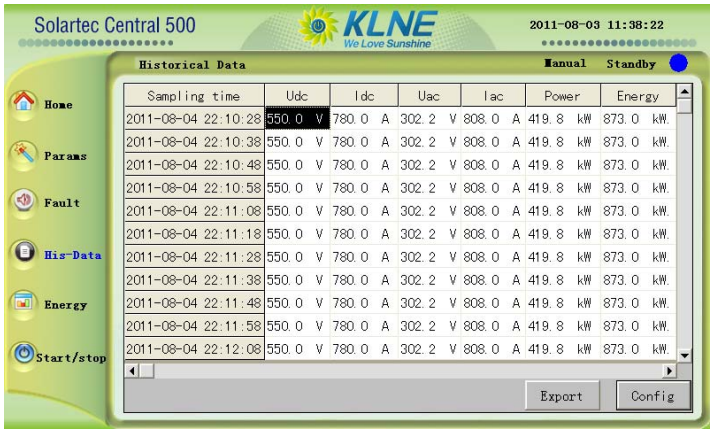
The system records the equipment fault messages automatically. The user can enter the correct starting the stopping times through this picture to execute fault message inquiry and other operations.

Note:

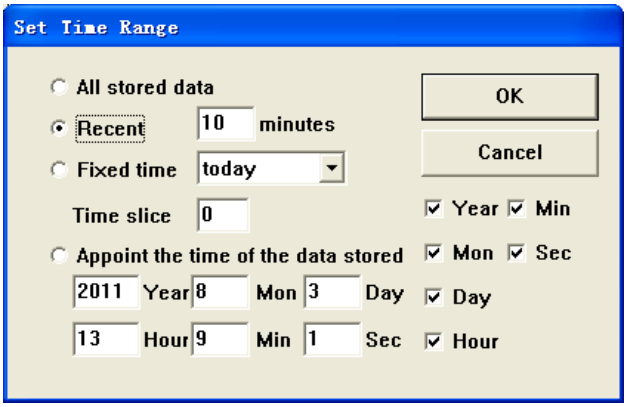
① To facilitate analysis of the fault cause, the historical fault data can be exported along with the historical data. For the operating method, see the operating instructions

for exporting the historical data;

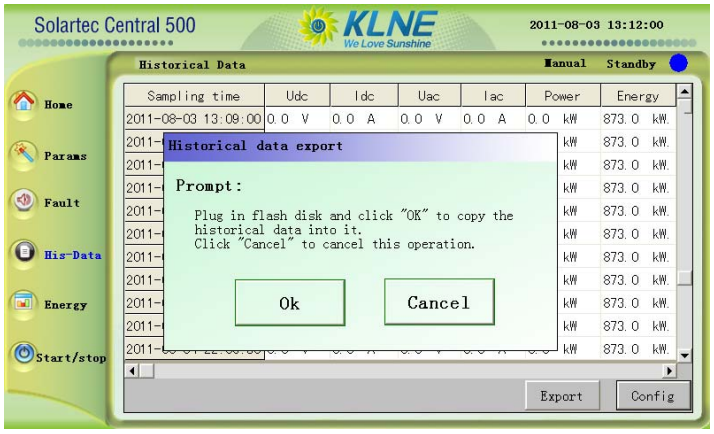
5.3.8 View the Historical Data



1. Click the “His-data” button on the navigation menu to open the historical data picture, the equipment automatically saves the DC voltage, DC current, AC voltage, AC current, output power and daily electricity generation at an interval of 10 seconds/time.



2. Inquire the historical data Click the “Config” button to set the time range. Then, click “OK” to view the historical data in the specified time period. Click “Cancel” to cancel the inquiry.



3. Export the historical data Click the “Export” button to open the “Historical data export” picture, insert the U-disk according to the prompt, and then click “OK”. If you do not want to execute the export operation now, click “Cancel”.

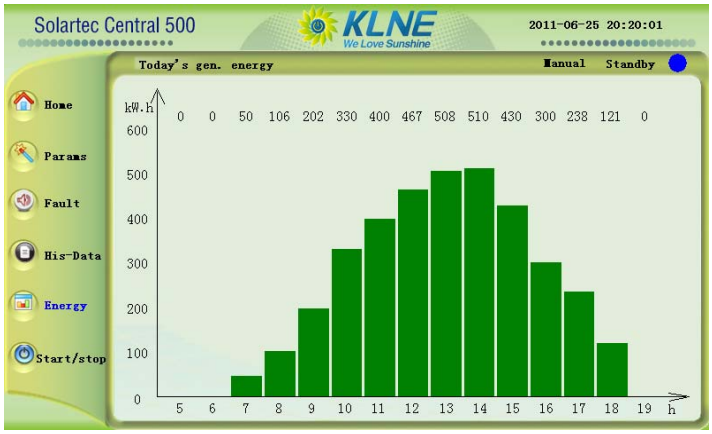
Note:

① About 50M of storage capacity of the touch screen is assigned to store the historical fault messages and historical data. If the quantity of historical data is larger than this capacity, the system will automatically delete the early historical data;

② The data are exported as binary files, which need to be converted into Excel files using special conversion tools;

③ The U-disk interface is a standard USB interface located at the rear of the touch screen, which supports U-disk storage not larger than 4G.

5.3.9 View the Daily Electricity Generation



1. Click the "Energy" button on the navigation menu to open the daily electricity generation picture. This picture displays the hourly electricity generation in each hour of the day as a column chart.

Note:

① If the current time is not on the hour, the electricity generation from 0 minute 0 second of the hour to the current time is displayed;

② Every morning, clear the daily electricity generation of yesterday and start counting again.

5.4 Data Upload Interface

Communication interface	optical fiber(SC, multi-mode or single-mode)
Default IP	192.168.2.10 255.255.255.0
Port	502
Communication protocol	Modbus TCP
Parameters	Voltage, current, power, electricity

	generation and other parameters

If you want to upload detailed parameters, please contact the manufacturer to obtain relevant information.

6. Grid-connected Power Generation

6.1 Pre-operation Inspection

- Check to see if the AC and DC sides have been connected correctly and securely.
- Check to see if the ground connection has been connected to the ground correctly and securely.
- Check to see if the environmental conditions are within the normal operation range of the equipment.
- Check to see if the emergency stop switch is popped up.
- Make sure that no one operates the inverter circuit.

6.2 Start

- After the above inspections have been completed, close the AC side circuit breaker.
- Observe whether the displays of the indicators and the human-machine interface are normal.

If one of the displays is abnormal, please open the AC side circuit breaker immediately.

The emergency stop switch may only be used in hazardous situations. It shall not be used to stop the equipment under normal conditions.

6.3 Running

Click the “Start” button on the touch screen and click OK. The equipment starts to judge the external

conditions and operate automatically.

In the first trial operation, observe whether the inverter operates normally, including noise, temperature, grid-connected voltage and current parameters, touch screen display, etc. In case of abnormalities, please make adjustments according to the error type and corresponding corrective method displayed on the screen. If you still have any questions, please contact the customer service personnel of the company.

6.4 Disconnect from the Power Grid

Solartec Central 500 grid-connected inverter performs the grid-connected power generation process automatically. When all conditions are met, it enters the grid-connected power generation mode. Equipment stop is classified as normal stop or abnormal stop. When the equipment is stopped, the AC contactor and DC contactor are open.

- Normal stop. Click the “Stop” button on the touch screen and click OK.
- Abnormal stop. In some special situations, the inverter disconnects from the power grid and enters the stopped state.

7. Fault Diagnosis

Faults are classified as recoverable faults or serious non-recoverable faults.

Fault list

No.	Name	Fault description	Handling method	Type
1	DC side overvoltage	The DC side voltage exceeds the upper limit	Decrease the panel's open circuit voltage	Non-recoverable
2	DC side overcurrent	The DC side current exceeds the upper limit	Decrease the panel power	Non-recoverable
3	Reverse flow of DC current	The DC current is less than -10A	Contact the after-sales service personnel	Non-recoverable
4	Reverse polarity of the panel	The DC voltage is less than 0V	Check the positive and negative polarities of the panel	Non-recoverable
5	DC side surge	The DC lightning protector has a fault	Replace the lightning protector module	Non-recoverable
6	AC side overvoltage	The AC side voltage is too high	Check the power grid	Recoverable
7	AC side overcurrent	The AC side current is too high	Decrease the panel power	Non-recoverable
8	AC side overfrequency	The AC side frequency exceeds the upper limit	Check the power grid	Recoverable
9	AC side underfrequency	The AC side frequency is lower than the upper limit	Check the power grid	Recoverable
10	AC side surge	The AC lightning protector has a fault	Replace the lightning protector module	Non-recoverable
11	Fuse failure	Fuse failure	Replace the fuse	Non-recoverable
12	Level 1 alarm of insulation monitoring	Level 1 fault of insulation monitoring	Contact the after-sales service personnel	Non-recoverable
13	Level 2 alarm of insulation monitoring	Level 2 fault of insulation monitoring	Contact the after-sales service personnel	Non-recoverable
14※	Low voltage Ride through fault	Overtime of AC side low voltage	Check the power grid	Non-recoverable
15※※	System fault	System fault	Contact the after-sales service personnel and provide the fault code	Non-recoverable

※ System fault includes the faults of the equipment itself and all types of external faults which may

cause system shutdown.

※※ System fault includes the faults of the equipment itself and all types of external faults which may cause system shutdown. Please check the fault values and confirm the fault detail.

Note:

- For recoverable faults, the equipment will try again after the failure retry interval without manual intervention. When the fault has been recovered and the operating conditions are met, the equipment will switch to the running state automatically;
- For non-recoverable faults, handle the fault according to its type. If the fault cannot be cleared, please contact the after-sales service personnel and provide the name or code of the fault.

8. Technical Data

DC	
Recommended photovoltaic module power	550 kWp
Max.DC voltage	DC800 V
PV voltage range MPPT	DC 450-780 V
Max.input current	1000 A
Max.number of strings	10
AC	
Grid parameter	IT; 3~300V;50Hz
Nominal AC output power @300V	500kW
Nominal AC output current @300V	962A
THD of AC current（full-load）	<3％
Power factor	0.98(lagging) ~ 0.98(leading)
System	
Euro.efficiency	97.9%
Max.efficiency	98.3%
Noise development	<65dB

Power consumption at night	<40W
Ambient temperature	-25℃～+55℃
Cooling	Fan cooling
IP protection degree	IP20
insulating strength	50Hz，AC 2kV/1min
Lightning protection level	level C（II）
Display/operation	LCD touch screen
Communication interface	Optical fiber (SC, multi-mode or single-mode)
Dimensions	
(width x height x depth)	2600×2100×800 (mm)
Weight	1815 kg

9. Annex

9.1 Warranty

Warranty Period

The warranty period of the product is 24 months. If it is otherwise specified in the contract, the provisions of the contract shall prevail.

Evidence

Beijing Kinglong New Energy Technology Co. Ltd. will ask the customer to provide the purchasing invoice and date of the product. The trademark on the product shall be clearly visible; otherwise the company will not provide any warranty.

Conditions

If the product has a fault during the warranty period, Beijing Kinglong New Energy Technology Co. Ltd. will repair or replace it free of charge.

The replaced product shall be returned to Beijing Kinglong New Energy Technology Co. Ltd.

The customer shall reserve a proper time for Beijing Kinglong New Energy Technology Co. Ltd. to repair the faulty equipment.

The company will not provide any warranty in the following cases:

- Transportation damage
- Incorrect installation
- Incorrect retrofitting
- Incorrect use
- Operation in severe environments that do not meet the requirements of this manual.
- Any exceeding of the installation and operation ranges specified in relevant international standards.
- Damages cause by abnormal natural environment

The product dimensions and parameters may be subject to change. The company's latest information shall prevail. Please pay attention to our website.

9.2 About Kinglong

Beijing Kinglong New Energy Technology Co. Ltd. is an internationalized photovoltaic enterprise situated in Beijing Information Industry Base. We are committed to the research & development, production and marketing of high quality inverters and providing the customers with perfect photovoltaic inverter products.

As an increasingly powerful Sino-American joint venture, we build up our strength to meet the increasing demand of our customers all around the world. Nowadays, we have become the leader of Chinese photovoltaic inverter industry.

9.3 Contact Us

If you have any problems concerning Solartec Central 500 photovoltaic grid-connected inverter, please contact us. We will try our best to solve your problem. Please remember the following contact information:

Add：3rd Floor, Caihong South Building, No.11 Xinxi Road, Haidian District, Beijing,

China.

Postal code ： 100085

Tel. ： 010-62985751

Fax ： 010-62983711-808

Sales hotline ： 010-62988159

Technical service：010-62985751-221

Web ： www.kinglongpower.com

E-mail ： service@kinglongpower.com

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